

ABSTRACT OF THE DISCLOSURE

The communication system comprises amplification units coupled to the radiating transmission line at periodic locations for amplifying communication signals radiating and traveling upstream and downstream on the transmission line. During normal operation, mobile communication units near the radiating transmission line can communicate with other mobile communication units near the transmission line as well as with a base station by transmitting communication signals at a first and second frequency. The amplification units also comprise degradation detection units which detect when the communication system has been degraded between any two amplification units. Upon detection of a degradation, the amplification units commence to amplify, transmit and receive the communication signals across the location of the detected degradation at a first fault frequency and a second fault frequency, rather than the first frequency and second frequency, respectively. The first fault frequency and the second fault frequency are selected and the power level of the signals is increased in order to facilitate radiation of the communication signals across the detected degradation in the communication system.